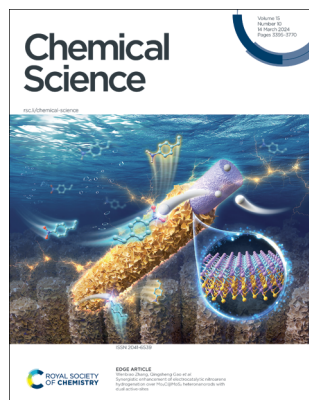


IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 15(10) 3395–3770 (2024)



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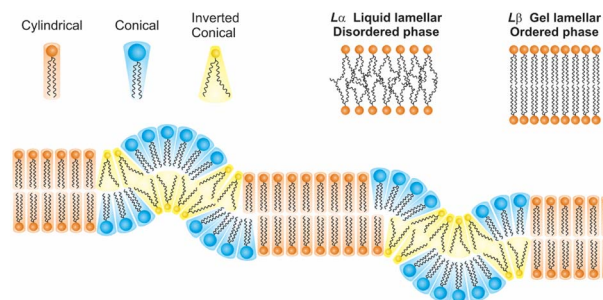
Inside cover
See Paul M. Donaldson *et al.*, pp. 3453–3465. Image reproduced by permission of Helen Towrie, Paul Donaldson and STFC from *Chem. Sci.*, 2024, **15**, 3453.

PERSPECTIVES

3408

The intricate link between membrane lipid structure and composition and membrane structural properties in bacterial membranes

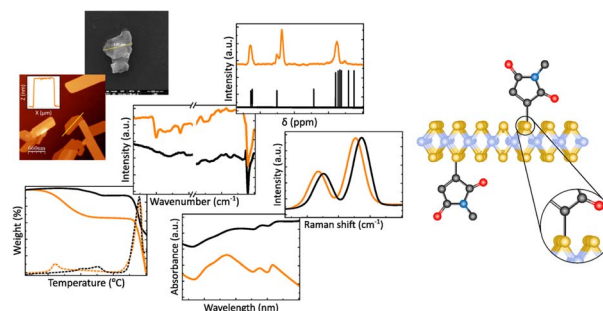
Tzong-Hsien Lee, Patrick Charchar, Frances Separovic, Gavin E. Reid, Irene Yarovsky and Marie-Isabel Aguilar*



3428

Characterization of emerging 2D materials after chemical functionalization

Marina Garrido, Alicia Naranjo and Emilio M. Pérez*



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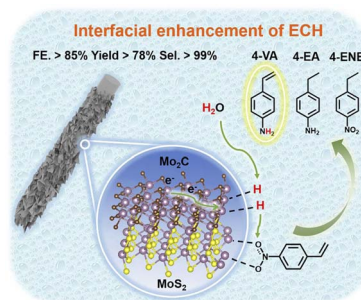
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3446

Synergistic enhancement of electrocatalytic nitroarene hydrogenation over $\text{Mo}_2\text{C}@\text{MoS}_2$ heteronanorods with dual active-sites

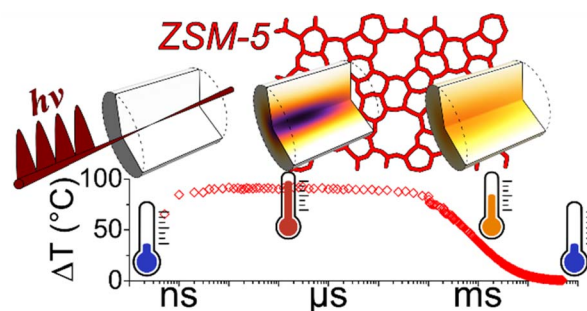
Wanling Zhang, Wenbiao Zhang,* Kun Yu, Jingwen Tan, Yi Tang and Qingsheng Gao*



3453

Laser induced temperature-jump time resolved IR spectroscopy of zeolites

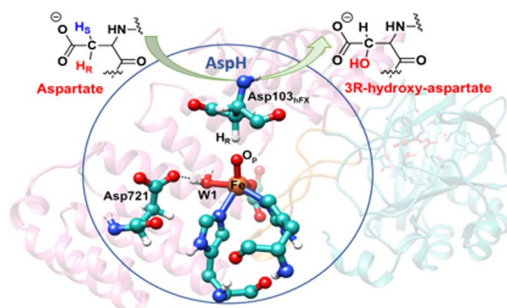
Alexander P. Hawkins, Amy E. Edmeades, Christopher D. M. Hutchison, Michael Towrie, Russell F. Howe, Gregory M. Greatham and Paul M. Donaldson*



3466

Unusual catalytic strategy by non-heme Fe(II)/2-oxoglutarate-dependent aspartyl hydroxylase AspH

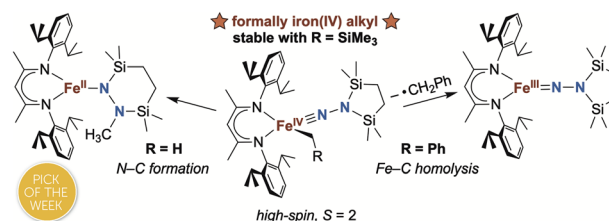
Anandhu Krishnan, Sodiq O. Waheed, Ann Varghese, Fathima Hameed Cherilakkudy, Christopher J. Schofield and Tatyana G. Karabencheva-Christova*



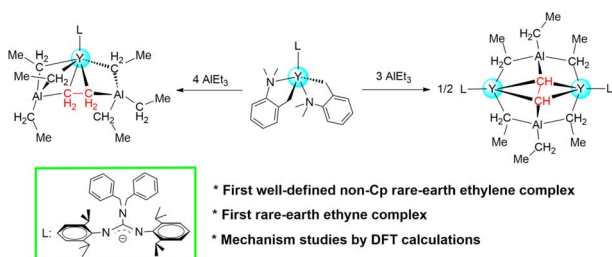
3485

Iron(IV) alkyl complexes: electronic structure contributions to Fe–C bond homolysis and migration reactions that form N–C bonds from N_2

Samuel M. Bhutto, Reagan X. Hooper, Sean F. McWilliams, Brandon Q. Mercado and Patrick L. Holland*



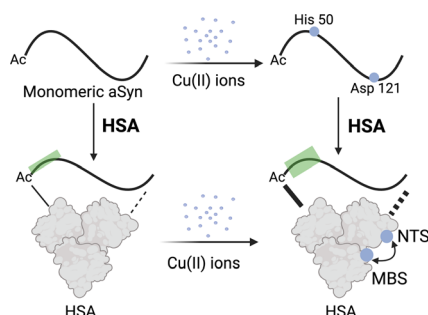
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Rare-earth metal ethylene and ethyne complexes

Wen Jiang, Thayalan Rajeshkumar, Mengyue Guo, Yuejian Lin, Laurent Maron* and Lixin Zhang*

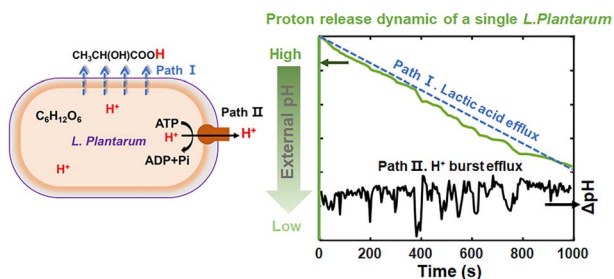
3502



Inhibition of toxic metal-alpha synuclein interactions by human serum albumin

Karla Martinez Pomier, Rashik Ahmed, Jinfeng Huang and Giuseppe Melacini*

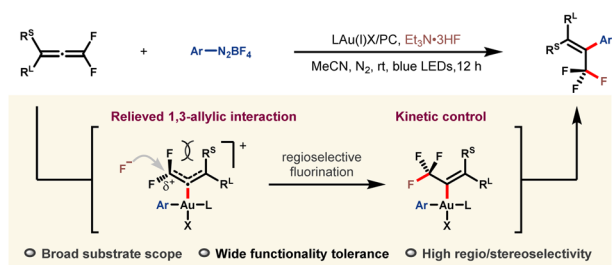
3516



Intermittent proton bursts of single lactic acid bacteria

Jia Gao, Kai Zhou, Haoran Li, Yaohua Li, Kairong Yang and Wei Wang*

3524



Multi-substituted trifluoromethyl alkene construction via gold-catalyzed fluor arylation of gem-difluoroalkenes

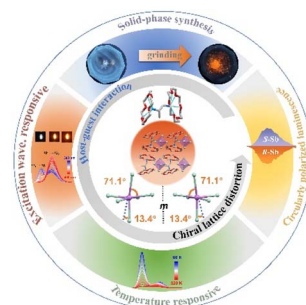
Zhi-Qiang Li, Hai-Jun Tang, Zaixin Wang, Cheng-Qiang Wang* and Chao Feng*



3530

Multi-stimuli-responsive luminescence enabled by crown ether anchored chiral antimony halide phosphors

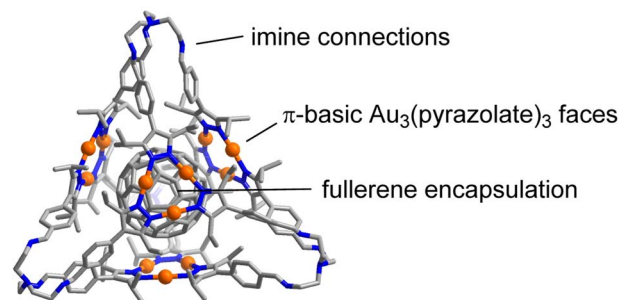
Xiao Han, Puxin Cheng, Shanshan Han, Zhihua Wang, Junjie Guan, Wenging Han, Rongchao Shi, Songhua Chen, Yongshen Zheng,* Jialiang Xu* and Xian-He Bu



3539

Molecular imine cages with π -basic $\text{Au}_3(\text{pyrazolate})_3$ faces

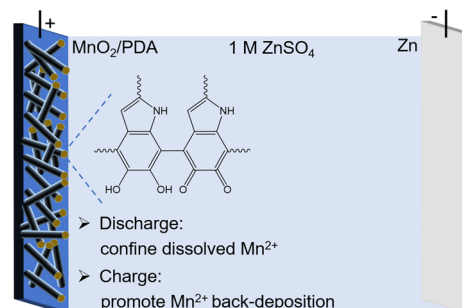
Noga Eren, Farzaneh Fadaei-Tirani, Rosario Scopelliti and Kay Severin*



3545

A polydopamine coating enabling the stable cycling of MnO_2 cathode materials in aqueous zinc batteries

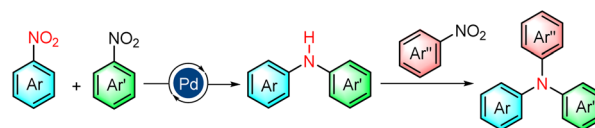
Guoli Zhang, Jiaqi Zhu, Lu Lin, Yaozhi Liu, Shuo Li, Qianrui Li, Xiao-Xia Liu* and Xiaoqi Sun*



3552

Dual role of nitroarenes as electrophiles and arylamine surrogates in Buchwald–Hartwig-type coupling for C–N bond construction

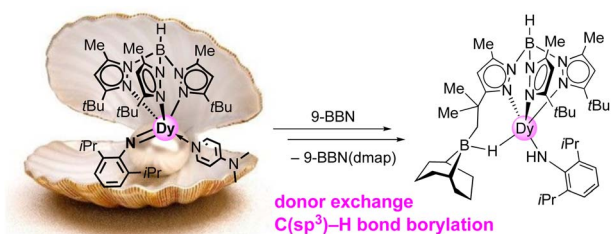
Zhiguo Lei, Jiaxin Yao, Yuxuan Xiao, Wenbo H. Liu, Lin Yu,* Wengui Duan* and Chao-Jun Li*



- cheap chemical feedstocks
- high-value products
- switchable chemoselectivity
- streamlined synthetic route
- high step- and atom-economy
- halides and metal reductant-free



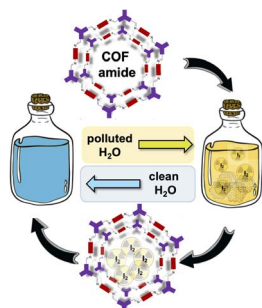
3562



Terminal dysprosium and holmium organoimides

Theresa E. Rieser, Dorothea Schädle,
Cécilia Maichle-Mössmer and Reiner Anwander*

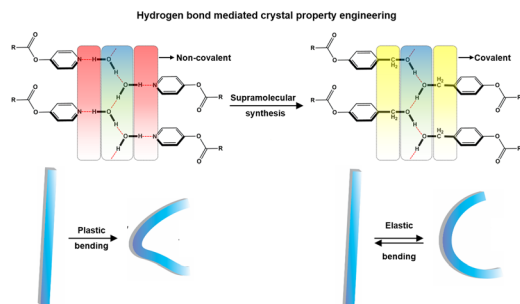
3571



Rapid, high-capacity adsorption of iodine from aqueous environments with amide functionalized covalent organic frameworks

Niyati Arora, Tanay Debnath, Milinda C. Senarathna,
Rebecca M. Johnson, Isabella G. Roske,
G. Andrés Cisneros* and Ronald A. Smaldone*

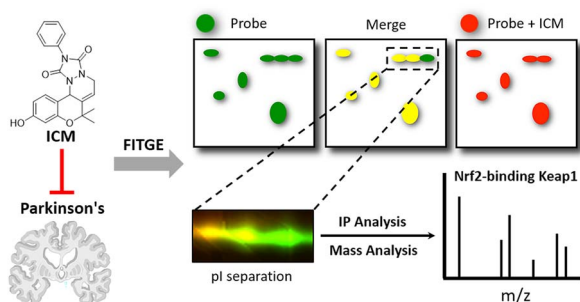
3578



Crystal property engineering using molecular-supramolecular equivalence: mechanical property alteration in hydrogen bonded systems

Saikat Mondal, C Malla Reddy* and Subhankar Saha*

3588



Inflachromene ameliorates Parkinson's disease by targeting Nrf2-binding Keap1

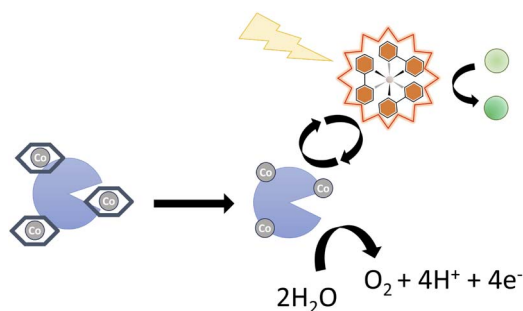
Junhyeong Yim, Yoon Soo Hwang, Jae-Jin Lee,
Ju Hee Kim, Jeong Yeob Baek, Jaeyeong Jeong,
Young Il Choi, Byung Kwan Jin and Seung Bum Park*



3596

An artificial metalloenzyme that can oxidize water photocatalytically: design, synthesis, and characterization

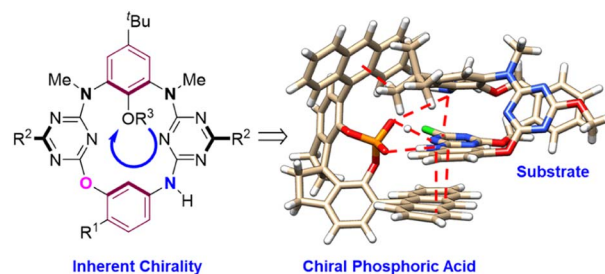
Ehider A. Polanco, Laura V. Opdam, Leonardo Passerini, Martina Huber, Sylvestre Bonnet* and Anjali Pandit*



3610

De novo synthesis of inherently chiral heteracalix[4] aromatics from enantioselective macrocyclization enabled by chiral phosphoric acid-catalyzed intramolecular S_NAr reaction

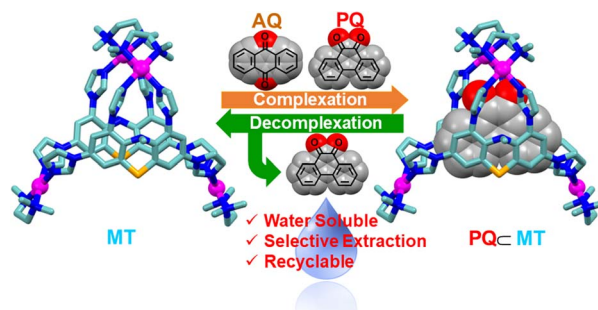
Xing-Chi Li, Ying Cheng,* Xu-Dong Wang, Shuo Tong* and Mei-Xiang Wang*



3616

A water-soluble Pd_4 molecular tweezer for selective encapsulation of isomeric quinones and their recyclable extraction

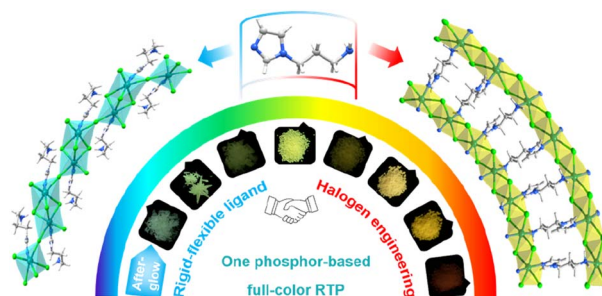
Dharmraj Prajapati, Pallab Bhandari, Ennio Zangrando and Partha Sarathi Mukherjee*



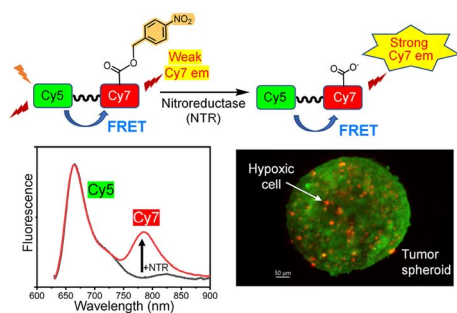
3625

A flexible ligand and halogen engineering enable one phosphor-based full-color persistent luminescence in hybrid perovskitoids

Guowei Xiao, Yu-Juan Ma, Zhenhong Qi, Xiaoyu Fang, Tianhong Chen and Dongpeng Yan*



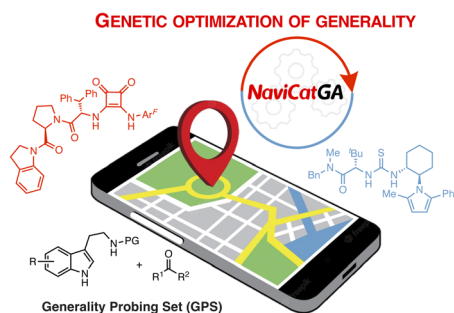
3633



Ratiometric near-infrared fluorescent probe for nitroreductase activity enables 3D imaging of hypoxic cells within intact tumor spheroids

Janeala J. Morsby, Zhumin Zhang, Alice Burchett, Meenal Datta* and Bradley D. Smith*

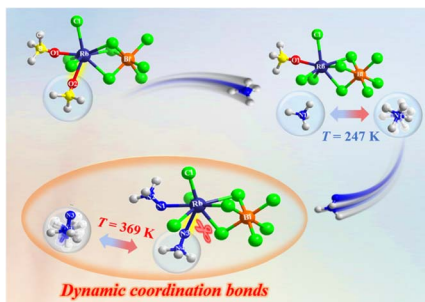
3640



A genetic optimization strategy with generality in asymmetric organocatalysis as a primary target

Simone Gallarati, Puck van Gerwen, Ruben Laplaza, Lucien Brey, Alexander Makaveev and Clemence Corminboeuf*

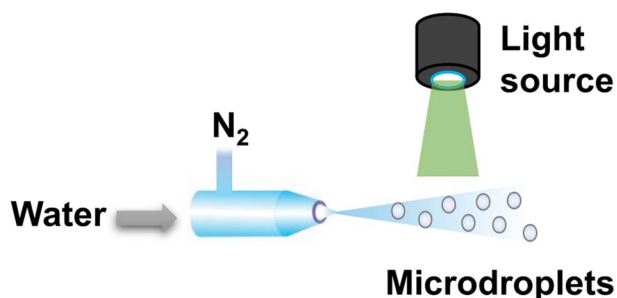
3661



Designing dynamic coordination bonds in polar hybrid crystals for a high-temperature ferroelastic transition

Yao-Bin Li, Xiao-Xian Chen, Wei-Jian Xu, Ya-Ping Gong, Hui Ye, Zhi-Shuo Wang and Wei-Xiong Zhang*

3670



The power of microdroplet photochemistry

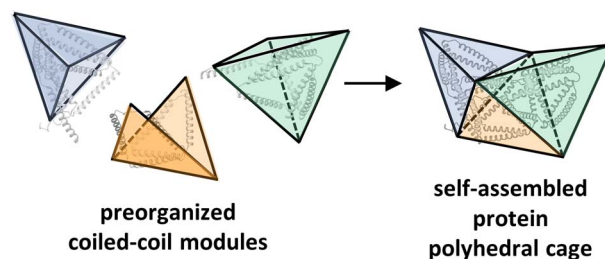
Xiaowei Song and Richard N. Zare*



3673

Preorganized cyclic modules facilitate the self-assembly of protein nanostructures

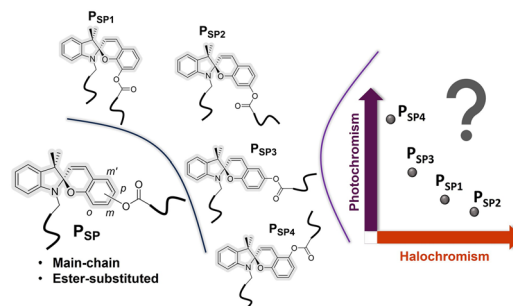
Jaka Snoj, Fabio Lapenta and Roman Jerala*



3687

Photo- and halochromism of spirocyan-based main-chain polymers

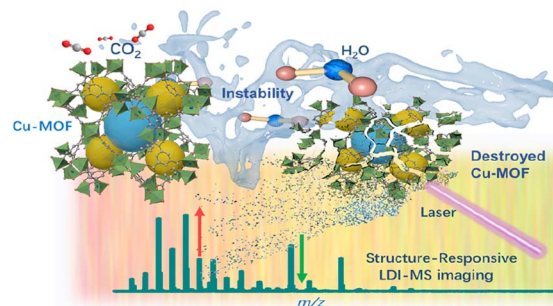
Linh Duy Thai, Jochen A. Kammerer, Hatice Mutlu* and Christopher Barner-Kowollik*



3698

Probing the stability of metal–organic frameworks by structure-responsive mass spectrometry imaging

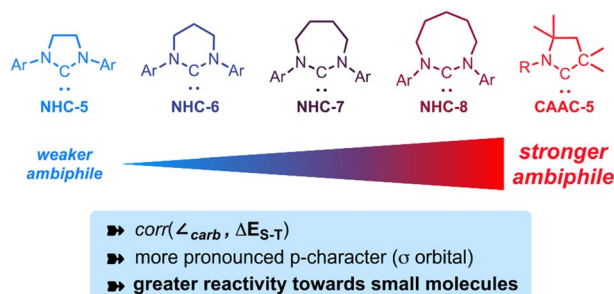
Yue Lin, Ke Min, Wende Ma, Xuezhi Yang, Dawei Lu, Zhenyu Lin, Qian Liu* and Guibin Jiang



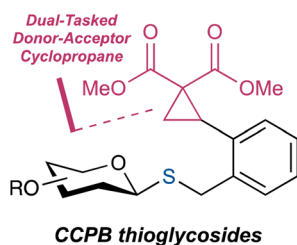
3707

Ambiphilicity of ring-expanded N-heterocyclic carbenes

François Vermersch, Victor T. Wang, Mehdi Abdellaoui, Rodolphe Jazzar* and Guy Bertrand*



3711

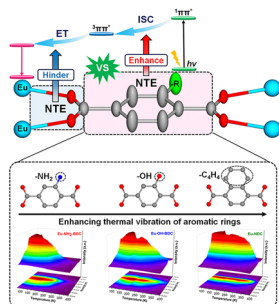


- Stable yet highly reactive
- Orthogonal activation by Sc^{3+}
- Versatile S-glycosylation
- One-pot glycosylation
- Synthetic application

Efficient *O*- and *S*-glycosylation with *ortho*-2,2-dimethoxycarbonylcyclopropylbenzyl thioglycoside donors by catalytic strain-release

Han Ding, Jian Lv, Xiao-Lin Zhang, Yuan Xu, Yu-Han Zhang and Xue-Wei Liu*

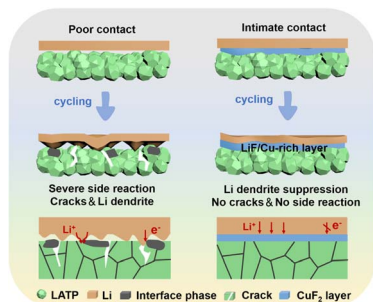
3721



Regulating luminescence thermal enhancement in negative thermal expansion metal–organic frameworks

Liang Chen, Yili Cao,* Rui Ma, Hongmei Cao, Xin Chen, Kun Lin, Qiang Li, Jinxia Deng, Chunyu Liu, Yilin Wang, Ling Huang* and Xianran Xing*

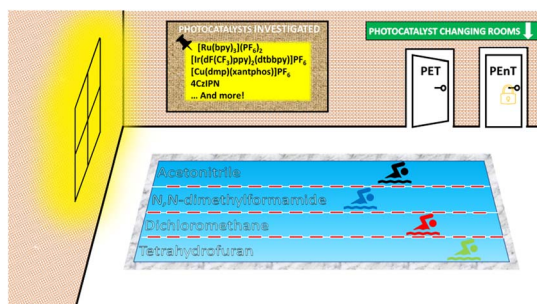
3730



Stabilizing a $\text{Li}_{1.3}\text{Al}_{0.3}\text{Ti}_{1.7}(\text{PO}_4)_3/\text{Li}$ metal anode interface in solid-state batteries with a LiF/Cu-rich multifunctional interlayer

Decheng Ding, Hui Ma, Huachao Tao,* Xuelin Yang* and Li-Zhen Fan*

3741



Lessons learnt in photocatalysis – the influence of solvent polarity and the photostability of the photocatalyst

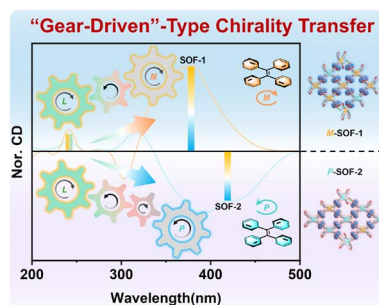
Megan Amy Bryden, Francis Millward, Oliver S. Lee, Lauren Cork, Malte C. Gather, Andreas Steffen and Eli Zysman-Colman*



3758

"Gear-driven"-type chirality transfer of tetraphenylethene-based supramolecular organic frameworks for peptides in water

Chaochao Yan, Qingfang Li, Kaige Wang, Wannan Yang, Jingyu Han, Yawen Li, Yunhong Dong, Dake Chu, Lin Cheng and Liping Cao*



3767

Correction: f-Element heavy pnictogen chemistry

Jingzhen Du, Philip J. Cobb, Junru Ding, David P. Mills* and Stephen T. Liddle*

